WHAT IS CLAIMED IS:

1. A recombinant adenovirus which carries an adenovirus vector construct comprising an expression region encoding p53, the vector capable of expressing p53 in human malignant cells.

2. The recombinant adenovirus of claim 1, wherein the vector construct comprises a p53 expression region positioned under the control of the cytomegalovirus IE promoter.

3. The recombinant adenovirus of claim 2, wherein the vector construct comprises a p53 expression region, the cytomegalovirus IE promoter and the SV40 early polyadenylation signal.

4. The recombinant adenovirus of claim 1, wherein a gene essential for adenovirus replication is deleted from the vector construct and the p53 expression region is introduced in its place.

5. The recombinant adenovirus of claim 1, wherein the E1A and E1B regions of the adenovirus vector are deleted and the p53 expression region is introduced in their place.

6. The recombinant adenovirus of claim 1, which has the genome structure of Figure 1.

7. The recombinant adenovirus of claim 1, dispersed in a pharmacologically acceptable formulation.

8. A recombinant host cell infected with a recombinant adenovirus in accordance with claim 1.

9. A method of restoring wild-type p53 protein function to a cell deficient in wild-type p53 comprising, contacting the cell with an amount of the recombinant adenovirus of claim 1 effective to express wild-type p53 in the cell.

10. The method of claim 9, wherein the cell is a cancer cell with a mutation in a p53 gene.

11. The method of claim 10, wherein the cell is a human lung cancer cell.

12. The method of claim 10, wherein the cell is a human breast cancer cell.

13. The method of claim 9, wherein the cell is located within a mammal and the adenovirus is administered to the mammal in a pharmacologically acceptable form.

14. A method for producing recombinant adenovirus, comprising:

(a) introducing an adenovirus plasmid and an expression vector into a suitable host cell by liposome-mediated transfection; and

(b) analyzing the cultured the host cell for the presence of a cytopathic effect which is indicative of homologous recombination and virus production.

15. The method of claim 14, wherein the liposome-mediated transfection step is DOTAP-mediated transfection.

16. The method of claim 14, wherein the adenovirus plasmid is a replication-defective adenovirus plasmid and the host cell complements the defect.

17. The method of claim 16, wherein the adenovirus plasmid lacks functional E1A and E1B and the host cell is an E1-expressing cell.

18. The method of claim 17, wherein the host cell is a 293 cell.

19. The method of claim 14, wherein the host cells are cultured in MEM media.

20. The method of claim 14, further comprising obtaining DNA from the supernatant of cells exhibiting a cytopathic effect and analyzing the DNA by PCR, using expression vector-specific and adenoviral genome-specific DNA primers, to confirm the presence of the recombinant adenovirus.

21. The method of claim 14, wherein the expression vector comprises a p53-encoding DNA segment positioned under the control of a promoter capable of directing p53 expression in human metastatic cells.

add A3

add B'